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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,030	08/19/2002	Michael Arand	410.018	5809

20311 7590 02/12/2004

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EXAMINER

PATTERSON, CHARLES L JR

ART UNIT PAPER NUMBER

1652

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/009,030	Applicant(s) ARAND ET AL.	
	Examiner Charles L. Patterson, Jr.	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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Claims 1, 3-5, 8-10, 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite in the recitation of "such as". It is not known whether the instant recitation is meant to be a limitation on the claim or simply illustrative. The instant phrase states that the epoxide hydrolase is "such as is obtained in essentially pure form from cells of fungi..." The phrase is taken to be illustrative so that any epoxide hydrolase reads on the instant claim language.

Claims 1, 3-5 and 14 are indefinite in the recitation of "essentially pure". The level of purity is not defined in the claim. Almost anything could be "essentially pure" without such a definition.

Claim 8-9 are indefinite in the recitation of "especially". It is not known whether the instant recitation is meant to be a limitation on the claim or simply illustrative.

Claim 8 is indefinite in the recitation of "preferably". It is not known whether the instant recitation is meant to be a limitation on the claim or simply illustrative.

Claim 10 is indefinite in the recitation of "contains a nucleotide sequence of encoding a protein...". It is not known what is meant by this claim.

Claim 12 is indefinite in the recitation of "corresponding to the said epoxide or vicinal diols. There is no antecedent basis for "said vicinal diols".

Claims 12 and 14 are indefinite in the recitation of "optionally". It is not known whether the instant recitation is meant to be a limitation on the claim or simply illustrative.

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Claim 12 is indefinite in the recitation of "in which R^1 , R^2 , R^3 and R^4 represent any group characteristic of pharmaceutical and plant-protection compounds". It is not known to what the instant claim is intended to be limited as these groups that are characteristic of pharmaceutical and plant-protection compounds are not defined.

Claim 12 is also confusing in the recitation of "of specific optical materials corresponding to the said epoxides or vicinal diols" and "or of just...formula (III)" on the last line. It is not known what was intended by either of these recitations. Also, it is not seen where the former recitation has enablement in the specification.

Claims 12 and 13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to the other claims in the alternative only. See MPEP § 608.01(n).

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 7-10 and 12-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The instant claims are drawn to epoxide hydrolases from "cells of fungi" that may be "derived by substitution, suppression or addition of one or

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more amino acids of the aforementioned protein" or nucleotides encoding them that are "derived from SEQ ID NO:1, by substitution, suppression or addition of at least one nucleotide". The instant specification teaches and enables an epoxide hydrolase from *Aspergillus niger* that has the sequence SEQ ID NO:2 and is encoded by SEQ ID NO:1. It is noted that the phrase "derived by substitution, suppression or addition of one or more amino acids of the aforementioned protein" and "derived from SEQ ID NO:1, by substitution, suppression or addition of at least one nucleotide" read on any protein or nucleotide whatsoever. Applicant has not taught how to obtain proteins or nucleotides within the scope of the instant claims. The only claim that is not rejected is claim 6. Claim 4 would not be rejected if it did not also contain the recitation of *Aspergillus turingensis*.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Arand, et al. (AF). The instant reference apparently teaches the instant claims. A certified translation of the French priority document has not been received and therefore this priority date may not be used.

Claims 1-5, 12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Nellaiah, et al. (AD) or Morisseau, et al. (U). The instant two references teach an epoxide hydrolase from *Aspergillus niger*. The term "essentially pure" as in claim 1 is indefinite, as outlined *supra* in the 35 USC § 112 second paragraph rejection.

Claims 1-5, 12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Morisseau, et al. (V). The reference teaches an epoxide hydrolase from *Aspergillus niger* that is apparently the same as that of the instant claims. In column 1 of page 387 it teaches the purification steps in claim 14.

Claims 1-2, 5, 12 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Chartrain, et al. (B). The instant two references teach a fungal epoxide hydrolase. The term "essentially pure" as in claim 1 is indefinite, as outlined *supra* in the 35 USC § 112 second paragraph rejection.

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Claims 1-5, 12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Nellaiah, et al. (AD) or Morisseau, et al. (U) in view of the general knowledge in the prior art. It is maintained that claim 1-5, 12 and 15 are anticipated by the instant primary references, as outlined *supra*. Morisseau, et al. (U) at the top of column 2 of page 447 teach several of the purification methods in claim 14. The general state of knowledge in the prior art recognizes that there are many methods of purification of enzymes, including those in claim 14. It would have been obvious and well within the skill level of one of ordinary skill in the art to use the methods in claim 14 in view of Morisseau and the general knowledge in the prior art, absent unexpected results. The use of particular methods of purification would have been routine experimentation, absent convincing proof to the contrary.

Claim 6 is objected to as being dependent upon a rejected base claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Patterson, Jr., PhD, whose telephone number is 571-272-0936. The examiner can normally be reached on Monday - Friday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-308-4242.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or

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Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles L. Patterson, Jr.
Primary Examiner
Art Unit 1652

Patterson
February 5, 2004